

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47

BEFORE THE STATE OF WASHINGTON  
ENERGY FACILITY SITE EVALUATION COUNCIL

IN RE APPLICATION NO. 99-1

EXHIBIT \_\_\_\_ (CM-RT)

SUMAS ENERGY 2 GENERATION  
FACILITY

**APPLICANT'S PREFILED REBUTTAL TESTIMONY**

**WITNESS : CHARLES MARTIN**

**Q. Please introduce yourself to the Council.**

A. My name is Charles Martin. I am Treasurer of Sumas Energy 2, Inc. (SE2) and vice president of National Energy Systems (NESCO), both based in Kirkland, Washington. I have been involved in various consulting, financial and administrative activities of NESCO, since approximately 1986. As Treasurer of SE2, I am responsible for financial matters, and certain business development and communications activities.

**Q. Please describe your involvement with the SE2 project and application to EFSEC.**

EXHIBIT \_\_\_\_ (CM-T) –  
CHARLES MARTIN  
REBUTTAL TESTIMONY - 1

[31742-0001/Charles Martin Rebuttal.doc]

PERKINS COIE LLP  
1201 Third Avenue, Suite 4800  
Seattle, Washington 98101-3099  
(206) 583-8888

1 A. I have been involved in many areas related to the development of SE2 including:  
2  
3 financial analysis, business development, marketing, fuel supply, environmental impact  
4  
5 mitigation, infrastructure development, and coordination with governmental entities  
6  
7 and communications.  
8  
9

10  
11 **Q. Which testimony are you responding to in rebuttal.**  
12

13 A. I am responding to testimony concerning energy policy issues, greenhouse gas  
14  
15 mitigation, long-term power contracts, integrated resource planning, the development  
16  
17 of renewable energy sources, natural gas supply and pricing, backup fuel sources and  
18  
19 pricing, pipelines, build windows, water planning, plant efficiencies, Canadian air  
20  
21 impacts, site restoration and public communications about the project, in response to  
22  
23 portions of the prefiled testimony of Richard Gammon, K. C. Golden, Nancy Hirsh,  
24  
25 Connie Hoag, Peter Sagert, Jim Lazar, Bradley Smith, John Sproul, Tony Usibelli,  
26  
27 Dave Warren and Peter West.  
28  
29  
30

### 31 ENERGY POLICY 32

33 **Q. Mr. Warren and Mr. Usibelli recommend that EFSEC require SE2 to enter five-**  
34  
35 **year contracts totaling 60% of the project's output prior to beginning**  
36  
37 **construction. Is this recommendation problematic from the standpoint of a**  
38  
39 **project developer?**  
40

41 A. Yes. Mr. Warren's and Mr. Usibelli's suggestion that EFSEC should regulate how we  
42  
43 may contract to sell its power seems very unusual. In our free market economy,  
44  
45 government does not require other businesses to enter into long-term sales contracts  
46  
47 prior to building factories, warehouses, stores or other facilities. Instead, we depend

1 upon private enterprise to evaluate risks and determine whether or not to go forward  
2 with capital investments without guaranteed contracts. It seems odd to me, given the  
3 shift toward less regulation in the power industry, to suggest that a facility-siting  
4 agency would attempt to regulate the sale of power. Here, SE2 intends to be a  
5 merchant plant. This means SE2 will generate power and sell it into the short-term  
6 market under contracts expected to range in term from a few hours up to several  
7 years. The precise mix of customers and contractual terms will be dictated by market  
8 forces that will change over time as circumstances change. The suggestion that the  
9 project contract for sale of 60% of its output on a long-term basis (or any basis) prior  
10 to beginning construction is the antithesis of the concept of a merchant plant.  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21

22 **Q. Mr. Warren and Mr. Usibelli indicate that purchasers in the western U.S. power**  
23 **market do enter into long-term contracts, and therefore it should not be difficult**  
24 **for SE2 to sign up purchasers for five-year contracts. As a project developer, do**  
25 **you agree with this testimony?**  
26  
27  
28  
29

30 **A.** No. It may or may not be true that certain western power purchasers would enter into  
31 long-term contracts under terms that would allow SE2 to go forward with this project.  
32 It is certainly true that there are relatively few long-term power purchase contracts  
33 today. Our concern is that a requirement that SE2 enter into those sorts of contracts  
34 would severely limit the options and potential customers available for SE2 and would  
35 put SE2 at a competitive disadvantage with other merchant plants in the west. This is  
36 not to say that SE2 might not enter into such arrangements in the future if they are  
37 commercially available and economically desirable, but we do not believe we should  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47

1 be required to do so. Rather, just like any other private business, SE2 should be free  
2 to make its own contractual decisions.  
3  
4  
5

6 **Q. In particular, Mr. Warren suggests that, prior to construction, SE2 should be**  
7 **required to enter five-year contracts selling 60% of its output as assurance that a**  
8 **portion of SE2's power will serve consumers within Washington state, and seems**  
9 **to imply that that EFSEC should require that such contracts be with**  
10 **Washington purchasers. As a developer, do you believe such a condition is**  
11 **necessary to ensure part of SE2's power serves Washington state?**  
12  
13  
14  
15  
16  
17

18 **A.** No. As a merchant plant, SE2's output will be available for purchase by all wholesale  
19 buyers in the region. If SE2 is a cost-competitive generator, Washington purchasers  
20 will want to purchase its output and they will have a natural advantage over purchasers  
21 outside the region due to transmission costs and transmission capacity limits. For the  
22 same reasons, the additional supply of power available from SE2 in Washington should  
23 create downward pressure on wholesale prices.  
24  
25  
26  
27  
28  
29  
30  
31

32 **Q. CTED recommends that EFSEC require purchasers of a substantial portion of**  
33 **SE2's output (Mr. Warren and Mr. Usibelli define substantial portion differently**  
34 **as 20% or more or 40% or more of the output) to demonstrate consistency with**  
35 **Integrated Resource Planning (IRP) (or a substantial equivalent). As a project**  
36 **developer, what is your response to this recommendation?**  
37  
38  
39  
40  
41

42 **A.** I agree that the Integrated Resource Planning (IRP) process has some merit. It is not,  
43 however, a process that directly involves or should involve wholesale power  
44 generators such as SE2, much less the siting of energy generation facilities. The IRP  
45  
46  
47

1 process, and other similar processes, were developed as a means for regulated or  
2 public utilities to evaluate and determine the best mix of resources to meet their needs,  
3 including demand-side resources such as conservation. Today, many utilities use IRP  
4 or other similar processes. If the federal or state legislature or an appropriate  
5 regulatory agency concludes that it is appropriate to require power purchasers to  
6 implement IRP processes, they could presumably impose that requirement directly on  
7 the purchasers. If CTED wants Washington state to require IRP, it should propose  
8 legislation to do so, not try to put SE2 in the middle. Mr. Warren's and Mr. Usibelli's  
9 suggestion that EFSEC should require SE2 to mandate IRP consistency by its  
10 customers is a very unusual way to implement energy policy.  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21

22 In addition, from our standpoint, the proposed requirement that SE2 ensure that any  
23 purchaser of more than 20% (or 40%) of its power have an IRP process is both  
24 impractical and unreasonable. Initially, the proposed requirement is commercially  
25 impractical because of SE2's position as a merchant plant in a competitive wholesale  
26 power market. SE2 may be selling its power on a monthly, weekly, daily or even  
27 hourly basis. In today's market, power is often purchased by brokers or other entities  
28 and then resold, often more than once. It would be impossible for SE2 to determine  
29 whether or not the second or third purchaser of its power had an IRP process, and it  
30 would not make much sense to monitor whether a broker or other reseller had an IRP  
31 process since they do not use the power. Likewise, it would be difficult to know who  
32 constituted a 20% or 40% purchaser of SE2's power. Would that percentage apply to  
33 hourly, daily, weekly, monthly, or annual sales? Would SE2 be required to keep track  
34 of each hourly or daily or weekly purchase, and then impose an IRP requirement at the  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47

1 point that a particular purchaser reached the 20% or 40% threshold? And how would  
2 SE2 even know whether purchasers had an IRP process? In this day and age, most  
3 power sales do not occur in the context of lengthy negotiations in which the  
4 commitment to IRP processes could be discussed. Instead, many sales occur rapidly  
5 via computer in a commodity market that provides no vehicle for evaluating a  
6 particular purchaser's IRP credentials.  
7  
8  
9  
10  
11  
12  
13

14 Furthermore, even if there were a practical way to impose this requirement, this sort of  
15 requirement would place SE2 at a competitive disadvantage vis-à-vis other merchant  
16 plants in the region. The administrative costs for SE2 to implement a program to  
17 assess which customers are subject to the IRP requirements and the IRP consistency of  
18 any such customers would be enormous, and may be reflected in the price of SE2's  
19 power. Moreover, in a competitive market, customers are less likely to purchase  
20 power from a generator whose energy comes with all kinds of strings attached. It  
21 makes little sense and is highly inequitable to place the burden of ensuring IRP  
22 consistency on one power plant -- in the hope, and with no certainty, that it might  
23 influence the policies of purchasers. If the legislature or regulatory agencies believes  
24 power purchasers should have IRP processes, it should require them directly rather  
25 than impeding the free market economy.  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40

41 **Q. As an alternative to its IRP recommendation, Mr. Warren suggests that,**  
42 **concurrent with siting and constructing the natural gas project, EFSEC should**  
43 **require SE2 to develop energy conservation and renewable energy projects**  
44  
45  
46  
47

1                   **equivalent to a third the capacity of the natural gas project. Do you agree with**  
2  
3                   **this recommendation?**

4           A.     No. First of all, this suggestion is also highly unusual in a free market economy. Our  
5  
6                 government normally does not condition approvals for new facilities on a private  
7  
8                 developer's willingness to build separate facilities that are thought to be socially  
9  
10                desirable. When Safeway applies for a permit to build a big new grocery store, their  
11  
12                permit is not conditioned on their building and operating a small organic vegetable  
13  
14                market – even if we as a society think that small organic vegetable markets are  
15  
16                wonderful things. That's not the way regulation works in this country. If we as a state  
17  
18                want to encourage renewable energy projects, we should establish incentives that  
19  
20                encourage the development of viable renewable energy projects.  
21

22  
23  
24                Furthermore, from the standpoint of a private developer, capital intensive projects  
25  
26                must stand on their own merits in order to obtain financing. Applying Mr. Warren's  
27  
28                proposal to SE2, SE2 would be required to construct a 220 MW conservation or  
29  
30                renewable energy project in addition to the 660 MW SE2 natural-gas fired plant. The  
31  
32                construction of a 220 MW alternative energy project is a huge undertaking in and of  
33  
34                itself. To tack such a project on to the development of a facility such as SE2 would  
35  
36                surely be the death knell of both projects. For a project such as SE2 to obtain  
37  
38                financing, it must be a low-cost generator and be able to demonstrate its economic  
39  
40                viability. All risks must be identified and mitigated, and all uncertainties must be  
41  
42                resolved. The requirement for an adjunct project with all the attendant and significant  
43  
44                risks and uncertainties would certainly make the primary project unable to obtain  
45  
46                financing.  
47

1  
2  
3 Although I do not believe it is appropriate to require SE2 to develop renewable  
4 resources as a condition of going forward with the SE2 generation facility, I want to  
5 emphasize that SE2 and NESCO are not opposed to renewable energy. Indeed,  
6 NESCO is open to the possibility of investing in viable renewable energy projects.  
7  
8 Unfortunately, alternative energy projects have so far proven to be economically viable  
9 in only a limited number of cases. The economic prospects of these projects are  
10 beginning to improve with technological advances, tax incentives, and "green power"  
11 pricing incentives that are now being provided by entities such as BPA, Tacoma  
12 Power, Seattle Light and others. Affiliates of SE2 have, in the past, constructed two  
13 biomass power projects, and are currently engaged in preliminary scooping for another  
14 possible biomass project and a possible wind project. In order for such alternative  
15 energy projects to have the best possible chance of success, however, they too must  
16 stand alone and demonstrate their economic viability.  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30

31 **Q. Mr. Usibelli testified that natural gas power plants "clearly should be a part of**  
32 **the mix of generating resources developed over the next 20 years. This mix of**  
33 **resources should also include a substantial component of cost-effective energy**  
34 **conservation and environmentally desirable renewable generation." Do you**  
35 **agree?**  
36  
37  
38  
39

40 **A.** Yes in general. During the next 20 years, I think natural gas power plants will be  
41 required to fill a large share of increased energy demands as well as replace some of  
42 our aging and less environmentally friendly generating resources. Conservation and  
43 the continued development of renewables is important, but this raises a state-wide and  
44  
45  
46  
47



1 nation-wide policy question that is much broader than the siting of SE2's proposed  
2 facility. If the state legislature really wants to encourage these projects it should  
3 consider tax breaks or other financial subsidies that would help these projects compete  
4 in the market. It seems to me that the appropriate public policy with regard to  
5 renewable resources is a legislative matter that goes far beyond the scope of this  
6 particular siting proceeding.  
7  
8  
9  
10  
11  
12  
13

14 **Q. K.C. Golden's testimony describes the City of Seattle's policy on greenhouse gas**  
15 **emissions, including the significance of the policy with respect to the market for**  
16 **clean energy resources and fossil-fueled resources. Does Mr. Golden's testimony**  
17 **or the City's policy change your assessment of the need and benefits favoring the**  
18 **SE2 project?**  
19  
20  
21  
22  
23

24 **A.** No. In fact, utilities such as Seattle Light will have to rely on clean natural gas fired  
25 generation such as SE2 as a first step in reducing their reliance on dirtier coal  
26 generating plants. Currently about 27% of the power consumed in the region is  
27 generated from coal. The transition from coal and older fossil fueled plants to modern  
28 clean natural gas fired plants such as SE2 is the largest single step that can be taken  
29 now toward improving the environmental impacts from power generation, including  
30 greenhouse gas emissions.  
31  
32  
33  
34  
35  
36  
37  
38  
39

40 As noted above, recent developments in technology, tax incentives and green power  
41 policies are beginning to improve the prospects for alternative energy projects. But,  
42 these projects must stand alone and demonstrate that they have adequately addressed  
43 all risks and are economically viable. It will take time for alternative energy projects to  
44  
45  
46  
47

1 become economically viable on a large scale and in broad application and even longer  
2 for such alternative projects to become a substantial portion of the overall generating  
3 capacity required in the region. Estimates of the time required are 15 to 20 years to  
4 achieve widespread cost competitiveness and much longer to actually become a  
5 significant portion of the regions generating portfolio. Natural gas plants such as SE2  
6 are the bridge to our clean energy future.  
7  
8  
9  
10  
11  
12  
13

14 **Q. Mr. Sproul recommends that EFSEC condition approval of the SE2 project on**  
15 **"periodic (e.g. 2 years) reevaluations of the project's net benefits, cost, and water**  
16 **use implications to local economic, social, and ecological concerns," and**  
17 **"establish provisions for mitigation if determined feasible and appropriate."**  
18 **From the standpoint of a project developer, is this a reasonable**  
19 **recommendation?**  
20  
21  
22  
23  
24  
25

26 **A. No. This sort of condition would simply make this project impossible to finance. No**  
27 **lender is going to give SE2 \$400 million to build a power plant that could be shut**  
28 **down 2 years later as a result of some undefined "reevaluation of the project's net**  
29 **benefits."**  
30  
31  
32  
33  
34  
35  
36

### 37 NATURAL GAS SUPPLY

38 **Q. In his testimony, Mr. Lazar expresses concern that SE2's use of natural gas**  
39 **might create natural gas supply shortages in the state. Is that a legitimate**  
40 **concern?**  
41  
42  
43

44 **A. This is not a valid concern. In May 2000, receptions were held in Seattle and Portland**  
45 **which were jointly hosted by the Government of Canada and Westcoast Energy. The**  
46  
47

1 title of the reception was "Fueling the Pacific Northwest." Pacific Northwest natural  
2 gas consumers were told that government, industry, and infrastructure are "ready for  
3 growth." The current status of peak day natural gas supply in Western Washington is  
4 a surplus position of about 300 MMcf/d (Engage 6/15/2000). The average utilization  
5 is much lower. Gas demand from SE2 will not commence *sooner* than early 2003,  
6 about 2.5 years from now. The Western Canadian Sedimentary Basin (WCSB) is a  
7 large supply pool with many more years of development to come and a lot of *current*  
8 activity in terms of building additional pipelines.  
9

10 Gas supply for SE2 will come from the WCSB and there is an abundance of natural  
11 gas available in the WCSB. A 1999 publication by the Canadian National Energy  
12 Board (Canadian Energy Supply and Demand to 2025, Table 5.1, Case 1) estimates  
13 the Ultimate (conventional) Potential Gas Resources in the WCSB to be about 335  
14 Trillion Cubic Feet (TCF). This includes 159 TCF in Discovered Marketable Reserves  
15 and 176 TCF in Undiscovered Resources. Since the publication, drilling results in the  
16 Northwest Territories (NWT) have shown that ultimate gas reserves in this area may  
17 be significantly larger than previously thought. Earlier this year, deliveries commenced  
18 from the NWT. As of January 1, 2000, affiliates of SE2 currently own natural gas  
19 reserves in BC and Alberta totaling about 159 BCF. SE2 affiliates are actively  
20 engaged in natural gas acquisitions and currently are negotiating on two transactions  
21 and are considering others.  
22

23 Pipeline service to Western Washington is via Westcoast Energy at Sumas and via  
24 Williams Pipeline Northwest from the WCSB and from the US Rocky Mountain  
25

1 producing area. Efforts to build additional pipeline capacity are numerous: Southern  
2 Crossing Pipeline I is currently under construction and will add capacity of 250  
3 MMcf/d. Southern Crossing Pipeline II, a possible future expansion would add  
4 additional capacity of 370-540 MMcf/d. Williams Pipeline Northwest is considering  
5 several expansions including in the Columbia Gorge and "South to North." Westcoast  
6 Pipeline is considering a 300 MMcf/d expansion of its T-South system. New projects  
7 under consideration or in the permitting phase include the Grant's Pass Lateral, the  
8 ORCA Pipeline and the Georgia Strait Crossing Pipeline. Natural Gas storage has  
9 recently been expanded at Jackson Prairie and three other projects are in the planning  
10 or permitting phases: Columbia Hills Storage, AEC Cherry Point and Mist (Oregon).

11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23 Finally, I think it is worth noting that during periods of peak natural gas demand, such  
24 as during a winter cold snap, SE2 will make its natural gas available to customers on  
25 LDCs by switching to diesel fuel for up to 15 days.  
26  
27  
28  
29  
30

31 **Q. Mr. Lazar also testifies that operation of the SE2 facility may result in increased**  
32 **natural gas prices in Washington. Do you agree with this comment?**

33  
34  
35 **A.** No. The price of natural gas in Washington state will not be directly affected by gas  
36 consumption by SE2. For decades, the Pacific Northwest has benefited from some of  
37 the nations lowest gas prices. This was due to the large captive supply of natural gas  
38 in NE BC and NW Alberta that had access to only one market, the PNW. In recent  
39 years, new pipelines running from NE BC to the Midwest have connected BC gas  
40 reserves to the continental market. The Northwest is now experiencing prices that are  
41  
42  
43  
44  
45  
46  
47

1 more in line with the rest of the US. Similar price increases are occurring in BC for  
2 the same reasons.  
3  
4

5  
6 Further, new gas generating capacity will be built somewhere in the Pacific Northwest.  
7  
8 The amount of new capacity that will be built, and therefore the amount of natural gas  
9 that will be consumed, will be based on the need for power and the infrastructure to  
10 support it. If SE2 is not built, another plant will be. The overall use of natural gas in  
11 the region will not be effected, and therefore, consumption of natural gas by SE2 will  
12 not directly impact prices.  
13  
14  
15  
16  
17  
18  
19

20  
21 **Q. Mr. Lazar uses a hypothetical 20% increase in natural gas demand due to**  
22 **electric facilities and a hypothetical resultant 20% increase in cost of all natural**  
23 **gas in the state as an example to conclude that natural gas electric generation is**  
24 **not currently cost-effective and "implies a total price roughly equal to the cost of**  
25 **developing renewable resources such as wind generation." As a project**  
26 **developer, do you agree with Mr. Lazar's assumptions and conclusions?**  
27  
28  
29  
30  
31

32  
33 **A.** Initially, I'm not sure I understand exactly what Mr. Lazar is trying to say. He seems  
34 to be saying that he thinks natural gas prices will be so high that SE2 will not be able  
35 to produce power at a competitive rate. I disagree. Our financial analysis indicates  
36 that we can produce low-cost power. The more important point, however, is that SE2  
37 will have to demonstrate its ability to produce competitively priced power in order to  
38 get financing for the project. If Mr. Lazar is correct that the project is not financially  
39 viable, we will be unable to obtain financing.  
40  
41  
42  
43  
44  
45  
46  
47

1 Mr. Lazar also seems to make several questionable assumptions about natural gas  
2 pricing that lead to his opinion that a wind generation project would be able to  
3 produce electricity at the same price as the SE2 project. Again, I disagree. We  
4 continue to evaluate other possible projects, but they would have to stand on their  
5 own merits financially.  
6  
7  
8  
9

10  
11  
12 **Q. Mr. Lazar testifies that Westcoast Pipeline "has sufficient capacity . . . to meet**  
13 **existing needs," that Westcoast has a "maximum of 150 mmcf/d to serve**  
14 **additional power generation facilities," and that the projects already approved**  
15 **by EFSEC (Satsop, Longview, and Chehalis) and locally (Tenaska II and Everett**  
16 **Delta) would more than utilize this capacity. Does this mean that the SE2**  
17 **project will require an expansion of the Westcoast Pipeline?**  
18  
19  
20  
21

22  
23  
24 **A.** No. Not necessarily. We are currently negotiating a pipeline interconnect agreement  
25 with Westcoast. They have indicated to us that there is currently adequate available  
26 uncontracted service to meet the demand of SE2. There is also some expansion  
27 underway and a substantial amount of expansion being considered in the region.  
28 Westcoast has indicated that should service become tight prior to commencement of  
29 SE2 operations, they would be willing and able to expand to meet the load.  
30  
31  
32  
33  
34  
35  
36  
37

38 As I indicated earlier, new natural gas-fired generating capacity will be built  
39 somewhere in the Pacific Northwest, and fuel will have be delivered to these facilities.  
40 One advantage to the SE2 facility compared to other new projects is that it would take  
41 its gas out of the pipeline system north of the U.S.-Canadian border and, therefore, not  
42 affect the availability of pipeline capacity in Washington state or further south. In this  
43  
44  
45  
46  
47

1 regard, the SE2 project would have less impact on the capacity of the pipeline system  
2 than other projects.  
3  
4

5  
6 Finally, I should point out that it is extremely unlikely that all, or that even half of the  
7 additional proposed power plants would be built. The financial markets will not  
8 undertake financing for a project that is not a low-cost generator and is not in a market  
9 that needs more supply. Therefore, new plants in excess of the region's need will not  
10 be built because they will not be able to be financed. There are many other practical  
11 limitations to development, financing, and constructing new power plants including,  
12 among other things, the project having sufficient gas supply and pipeline transmission  
13 under contract or control.  
14  
15  
16  
17  
18  
19  
20  
21

22  
23  
24 **Q. Mr. Lazar recommends that EFSEC defer certification of any additional natural**  
25 **gas generation projects "until a cumulative impact assessment on both price and**  
26 **supply of completing the existing facilities is prepared." Do you agree with this**  
27 **recommendation?**  
28  
29  
30  
31

32 **A.** No. Such a “cumulative impact assessment” would not be particularly useful in  
33 making facility siting decisions. Not all the existing permitted and possible plants will  
34 be built, so there is little point in studying the potential ramifications of building all of  
35 them. The amount of new capacity that will be built, and therefore the amount of  
36 natural gas that will be consumed, will be based on the need for power (the market),  
37 and the infrastructure to support it. Decisions about development of gas supply and  
38 pipeline capacity will be market driven and will be made, subject to permitting, by  
39 private companies. If some of these plants are not built in Washington, they will be  
40  
41  
42  
43  
44  
45  
46  
47

1 built in BC, Idaho, Oregon and so forth. The amount of natural gas consumed in the  
2 region will be the same, the impact on gas supply will be the same, the infrastructure  
3 needs will be the same, and the effects on price will be the same. If some plants are  
4 not built in Washington, the primary difference will be that the power system in  
5 Washington will be less reliable, power in Washington may be more expensive,  
6 additional transmission facilities may be necessary in Washington, and the tax and  
7 employment base will not occur in Washington. We are now in a regional/continental  
8 deregulating/deregulated market for power and natural gas. The regional market will  
9 go forward, and the effects on Washington will be more or less the same. The WCSB  
10 contains massive gas reserves and the Canadian government and the natural gas  
11 industry are committed to developing and delivering the reserves to customers  
12 throughout Canada and the U.S. Natural gas is the preferred method for power  
13 generation and substantial amounts of natural gas will be used to generate power  
14 throughout the Northwest and North America.  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30

31 **Q. In the alternative, Mr. Lazar recommends that EFSEC require SE2 to "contract**  
32 **for newly developed capacity on Westcoast Pipeline for delivery of gas from**  
33 **northern British Columbia to the border." Do you agree with this**  
34 **recommendation?**  
35  
36  
37

38 **A.** No. Westcoast Energy has substantial uncontracted capacity at this time. The decision  
39 about available capacity or expanding capacity, and how to recover such costs in rates,  
40 will and should be made by Westcoast subject to approval by its regulator. It makes  
41 no sense to build new capacity when there is available capacity on the system.  
42  
43  
44  
45  
46  
47



1 **Q. Mr. Lazar also alternatively recommends that EFSEC require SE2 to "contract**  
2 **for a minimum of five years of natural gas supply from newly developed natural**  
3 **gas supplies." Is this an appropriate recommendation?**  
4

5  
6 **A.** No. It would be highly unusual for a regulator to require a manufacturer (in this case  
7 of electricity) to have under contract a five-year supply of raw materials. In most  
8 industries, this would represent a significant barrier to entry. As of January 1, 2000,  
9 affiliates of SE2 currently own natural gas reserves in BC and Alberta totaling about  
10 159 BCF. SE2 affiliates are actively engaged in natural gas acquisitions and currently  
11 are negotiating on two transactions and are considering others. As stated previously,  
12 the WCSB contains massive gas reserves and the Canadian government and the natural  
13 gas industry are committed to developing and delivering the reserves to customers  
14 throughout Canada and the U.S.  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

26 **Q. Mr. Sagert's testimony suggests that SE2 should clarify whether it plans to use**  
27 **firm natural gas contracts and charge for volume releases to other commercial**  
28 **uses or some form of interruptible contract to reduce the cost of natural gas.**  
29 **What type of natural gas contract does SE2 plan to use?**  
30  
31  
32  
33

34 **A.** SE2 intends to make firm natural gas transmission arrangements. It may contract  
35 directly with the pipeline companies for firm service and arrange for capacity releases  
36 to interested local distribution companies (LDCs) under prescribed conditions to meet  
37 their peak requirements. Or, it may contract for firm capacity releases from LDC's  
38 currently holding such long-term firm service that is excess to their requirements other  
39 than during peak periods, and arrange to return the service to the applicable LDC to  
40  
41  
42  
43  
44  
45  
46  
47

1 meet their peak needs. It is during these peak periods, that SE2 would operate on  
2 back-up fuel.  
3  
4

5  
6 **DIESEL FUEL**  
7

8  
9 **Q. Mr. Lazar testifies that the SE2 project will use 9.2 million gallons per year of**  
10 **distillate fuel oil, or approximately 1% of the total distillate consumption in the**  
11 **entire state. Is this accurate?**  
12

13  
14 **A.** Mr. Lazar's estimate of 9.2 MMG/Y appears to be about right for 15 days of diesel-  
15 fuel operation. It is important to understand, however, that SE2 has applied for a Site  
16 Certificate allowing a maximum of 15 days of operation on low-sulfur diesel fuel, to be  
17 able to switch from natural gas to diesel in the event of a cold snap so that it can  
18 release natural gas to LDCs, yet continue to produce needed electricity. Having a  
19 permit that allows 15 days of diesel operation does not mean that SE2 will run on  
20 diesel 15 days each year. In fact, SE2 has committed to the BC Ministry of  
21 Environment, Lands and Parks, to limit diesel operations to an average of not more  
22 than 10 days per year over a ten year rolling average.  
23  
24  
25  
26  
27  
28  
29  
30  
31

32  
33  
34 Based on weather history, we think it is more likely that we will actually use backup  
35 diesel fuel for an average of about 3.5 days each year. Typical cold snaps are five days  
36 or less and, by definition, are rare occurrences. A five-day cold snap would require  
37 that over the first four days about 156,000 gallons per day would have to be delivered.  
38  
39 At the conclusion of a cold snap, a decision about refilling the tank would be made.  
40  
41  
42  
43  
44  
45  
46  
47

1 **Q. Mr. Lazar testified that the SE2 facility is designed to store only about four days**  
2 **of backup fuel on-site and therefore "if an extended period of high natural gas**  
3 **prices and/or natural gas supply curtailment occurred," SE2 would look for**  
4 **additional fuel to operate the facility and implies that this could cause diesel fuel**  
5 **shortages and price increases. Is such a concern justified?**

6  
7  
8  
9  
10  
11 **A.** It is unclear that SE2 would cause shortages or price impacts. What is clear is that the  
12 circumstances under which SE2 would consume its on-site storage supply and  
13 continue to run on back-up fuel are very unlikely to occur. The circumstances where  
14 this did occur would be one of extreme public safety concern wherein LDCs would  
15 need SE2's natural gas to meet residential heating demands. These same  
16 circumstances would result in the same extreme public need for reliable and  
17 uninterrupted power supply. In such circumstances, it is in the public interest to make  
18 the natural gas supply available to LDCs and to continue to generate electricity  
19 utilizing back-up fuel.  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30

31 **Q. Mr. Lazar has recommended that EFSEC require SE2 to maintain a 15-day**  
32 **supply of distillate fuel in storage either on- or off-site. Do you agree with this**  
33 **recommendation?**

34  
35  
36 **A.** No, I do not think maintaining additional storage is necessary or appropriate.  
37  
38 Between the two refineries in northwest Washington that produce low sulfur diesel,  
39 and the large bulk storage facility near Abbotsford that is tied into a large refinery in  
40 Edmonton, there is adequate storage and supply of diesel fuel in the area. The  
41 refineries and storage facilities would be aware of the SE2 facility and would make  
42 rational business decisions about the amount of diesel fuel to keep in inventory.  
43  
44  
45  
46  
47

1  
2  
3 **Q. As an alternative, Mr. Lazar has proposed that EFSEC require SE2 to build a**  
4 **liquefied natural gas (LNG) facility or contract for a supply of LNG to use as a**  
5 **backup fuel. Likewise, Ms. Hirsh testified that SE2 should consider LNG as an**  
6 **alternative to backup distillate. From the standpoint of a project developer, is**  
7 **LNG a reasonable alternative to low sulfur distillate oil as a backup fuel supply?**

8  
9  
10  
11  
12 **A.** No. The primary reason for back-up fuel is to make natural gas available through  
13 LDCs to homes, institutions and businesses during times of peak demand (cold snaps).  
14 Contracting for LNG would merely take that capacity away from the intended LDC.  
15 Frankly, we were surprised by the suggestion that an LNG facility might be preferable  
16 than use of low sulfur diesel fuel. In the past, NESCO has performed preliminary  
17 assessments of two potential LNG facilities in Western Washington. NESCO  
18 abandoned the projects for several reasons. Capital costs were estimated to be well in  
19 excess of \$100 million, operating costs are high, and our analysis indicated the facility  
20 would not be economically viable. We also determined that difficult engineering and  
21 safety issues would have be addressed, and that widespread public concern about the  
22 safety issues would make permitting extremely difficult.  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36

### 37 **NATURAL GAS PIPELINE**

38  
39 **Q. In his testimony, Mr. Lazar suggests that EFSEC should require SE2 to contract**  
40 **with a public utility, such as Cascade Natural Gas, for delivery of natural gas,**  
41 **rather than constructing and operating its own natural gas pipeline. Do you**  
42 **agree with this recommendation?**  
43  
44  
45  
46  
47

1 A. No. SE2 can build and maintain its private supply natural gas pipeline more  
2 economically and with a higher level of safety features than a local LDC. SE2 has  
3 already reached a stipulation agreement with the WUTC in which SE2 committed to  
4 numerous design, operation and maintenance conditions that go beyond federal and  
5 state regulatory requirements. Being a small, private company, SE2 is able to make  
6 these commitments, and we doubt that a public utility would do so. Furthermore,  
7 SE2's employees and management are "on the ground" every day of the year right  
8 where the pipeline is located. This provides SE2 with an added level of security about  
9 the safety and reliability of its investment. I would also point out that SE2's affiliate,  
10 the Sumas Cogeneration Company, has operated a similar private pipeline since 1993  
11 and has had an excellent safety record without a single safety incident.  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24

#### 25 BUILD WINDOW

26 **Q. Mr. Lazar recommends that, as a condition of site certification, EFSEC require**  
27 **SE2 to begin construction within two years of issuance of the Site Certification**  
28 **Agreement, and that commercial operation begin within four years of issuance of**  
29 **the Site Certification Agreement. Is that condition reasonable?**  
30  
31  
32  
33

34 A. No. This requirement is not practical. While we certainly hope to start and complete  
35 construction in this time frame, it is by no means a certainty. Once a project such as  
36 SE2 is permitted and all the costs, and conditions are known, and all the contractual  
37 matters are resolved, the financial markets will ultimately determine if and when a  
38 project will be financed and constructed. Some of the major factors affecting financing  
39 will be the power market for the project, the fuel supply, pipeline capacity, electrical  
40 interconnection and transmission capacity, the strength of the financial markets in  
41  
42  
43  
44  
45  
46  
47

1 general and so forth. A large project such as SE2 requires that a multitude of  
2 arrangements and conditions be brought together at one time to achieve financial  
3 closing and successful construction. To bring a development project to this point of  
4 maturity, poised for execution, requires a very substantial investment of private risk  
5 capital. To arbitrarily limit the time period available to execute on a project that is  
6 brought to this state of readiness is unreasonable and will unnecessarily limit the  
7 willingness of project proponents to make such investments in the future. This should  
8 be abundantly clear based on the history of other permitted but as yet unbuilt projects.  
9 Further, it would be clearly unfair to arbitrarily limit the opportunity for execution on  
10 the SE2 project on a discriminatory basis when EFSEC Site Certificates already have  
11 an established period of validity.  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24

#### 25 AIR EMISSION IMPACTS IN CANADA

26 **Q. Mr. Sagert testifies that locating a project close to an international border area**  
27 **"creates additional questions which need to be addressed through agreements**  
28 **and cooperation with the appropriate governmental jurisdictions." As the**  
29 **project developer, do you have a response to these comments?**  
30  
31  
32  
33

34 **A.** The siting of the SE2 project adjacent to the U.S.-Canadian border creates some  
35 additional complexities for the developer of the project but should not complicate the  
36 EFSEC process. As I understand it, EFSEC's jurisdiction stops at the border of  
37 Washington state. That being said, as the developer of the project, we believe it is  
38 very important that we understand how our project measures up to the requirements  
39 for siting in British Columbia and that we address the concerns of the citizens of BC  
40 and its government. SE2 has been involved in working with Canadian regulators and  
41  
42  
43  
44  
45  
46  
47

1 governmental entities on a number of fronts since very early in the development  
2 process .  
3  
4

5  
6 Prior to filing our Application with EFSEC, we met with the Cities of Sumas and  
7 Abbotsford to brief them regarding the project proposal. At that time, Abbotsford  
8 supported the project enthusiastically, and encouraged SE2 to purchase industrial  
9 grade water from Abbotsford and to utilize the Abbotsford wastewater treatment  
10 facility. We worked together with Abbotsford in what ultimately proved to be an  
11 unsuccessful attempt to get approval from the B.C. government to export the City's  
12 industrial grade water.  
13  
14  
15  
16  
17  
18  
19

20  
21  
22 SE2 has also been working through the National Energy Board of Canada (NEB)  
23 process to obtain permits for the International Power Line running from the U.S.-  
24 Canadian border to Clayburn . SE2 filed its permit application with the NEB in July of  
25 1999 and held its first public meeting in that same month in Abbotsford, British  
26 Columbia. A second public meeting on the power line was held in March of 2000.  
27 The NEB permitting process is continuing and public hearings are expected occur in  
28 September of 2000.  
29  
30  
31  
32  
33  
34  
35  
36

37  
38 With regard to air emissions, no Canadian permits are required because the facility is  
39 in the United States. In order to ensure that SE2 meets and exceeds Canadian  
40 requirements, and that concerns of Canadian citizens and government are addressed,  
41 however, SE2 has been involved in providing information and analysis and responding  
42 to questions and concerns with several Canadian governmental entities including  
43  
44  
45  
46  
47

1 Environment Canada, the Ministry of Environment, Lands and Parks, the Greater  
2 Vancouver Regional District, the Fraser Valley Regional District, and the City of  
3 Abbotsford. The provincial Ministry of Environment, Lands and Parks (MELP) has  
4 taken the role of the coordinating agency for air impact analysis and the majority of the  
5 interaction has been with MELP. My understanding of the technical air analysis is that  
6 SE2 meets Canadian air health standards in all cases, and in many cases by very large  
7 margins. Mr. Eric Hansen will address in further detail the technical analysis and  
8 interactions with MELP and other Canadian governmental entities in his testimony.  
9  
10  
11  
12  
13  
14  
15  
16  
17

18 SE2 and its consultants have had numerous meetings with the aforementioned  
19 Canadian entities and with others in Canada. In recent meetings with MELP, we have  
20 been told that although MELP has not completed their evaluation of the project, they  
21 believe SE2 is a very clean project and they do not expect to have any objections or  
22 serious problems with it. In fact, understandings have been reached between SE2 and  
23 MELP in several areas including: SE2 has agreed to design and construct an air  
24 monitoring station on Sumas Mountain. SE2 has agreed to limit diesel fuel operation  
25 to a maximum of not more than an average of ten days per year over a rolling ten-year  
26 period. SE2 and MELP have also agreed to work cooperatively on a generation  
27 curtailment agreement that includes BC Hydro for bad air episodes in the Fraser  
28 Valley. Finally, SE2 and MELP have reached a conceptual agreement regarding  
29 offsets of existing emissions in the Fraser Valley airshed. Earlier this month, SE2  
30 signed a letter of intent that we hope will lead to SE2 providing the \$750,000  
31 (Canadian) in capital funding necessary to implement an alternative to the current  
32 burning of wood debris removed from the Fraser River. The elimination of this wood  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47



1 burning in the Fraser River Valley would more than offset the emission of particulates  
2 and reduce the net impact of several other pollutants from the SE2 facility, creating a  
3 net benefit for the airshed.  
4  
5  
6  
7  
8

9 **Q. Mr. Sagert in particular implies that the Canadian government, including**  
10 **Environment Canada and the Ministry of Environment, Lands and Parks, may**  
11 **be critical of the SE2 proposal. Are you aware of concerns or criticisms of the**  
12 **SE2 project from the Canadian government?**  
13  
14  
15

16 **A.** Quite the contrary. As stated above, Canadian regulators appear to be quite pleased  
17 with the environmental responsibility of the SE2 project, the voluntary efforts we are  
18 willing to make above and beyond the basic requirements, and the precedent it will set  
19 for future projects.  
20  
21  
22  
23  
24  
25

## 26 GREENHOUSE GAS MITIGATION

27 **Q. Dr. Gammon testifies that "the [greenhouse gas] offset strategy offered by SE2,**  
28 **while a good first step, is insufficient if the goal is to balance the costs to the**  
29 **environment with the costs of production of new energy production." From**  
30 **your standpoint as a project developer, is or should this be the goal of**  
31 **greenhouse gas mitigation?**  
32  
33  
34  
35  
36  
37

38 **A.** Unfortunately, the combustion of fossil fuel results in the emissions of greenhouse  
39 gases. As I understand it, there are no local impacts from greenhouse gases. The  
40 impacts of greenhouse gases are felt globally as these gases accumulate in the upper  
41 atmosphere and contribute to global warming. As the project developer, our first  
42 environmental goal, as a threshold, is to meet all regulatory requirements. As a next  
43  
44  
45  
46  
47

1 environmental step, we consider any other environmental improvements that can be  
2 made to the project that are practical from a technological and economic standpoint.  
3 That is, we incorporate environmental enhancements that are technologically practical  
4 and do not compromise the economic competitiveness and viability of the project.  
5 Examples of these types of enhancements are the change from wet cooling to wet/dry  
6 cooling and the addition of SCR capacity in order to get down to 2 ppm in NOx  
7 emissions.  
8

9  
10  
11  
12  
13  
14  
15  
16 With regard to greenhouse gas emissions, combined cycle natural gas plants, such as  
17 SE2, convert natural gas to electricity with the lowest ratio of CO2 emitted relative to  
18 each MWH of electricity produced when compared to other fossil fuel plants. As the  
19 developer of SE2 and energy facilities in general, we understand that greenhouse gases  
20 are recognized as a significant environmental issue. However, there are no  
21 Washington state or federal regulations with regard to emissions of greenhouse gases.  
22 Mr. Jeremy Pratt will address greenhouse gas emissions from a regulatory and policy  
23 perspective in his testimony. The natural transition that is occurring from older fossil  
24 fueled plants, such as older natural gas-fired plants and oil and coal fired plants, to  
25 clean natural gas plants, like SE2, will, over time, result in a significant reduction in all  
26 emissions from power generation, including greenhouse gas. However, natural gas  
27 plants will still emit relatively large volumes of CO2. And although there are no  
28 regulations in Washington, as an emitter of greenhouse gases, we feel it is important to  
29 be part of the future solution to greenhouse gas impacts. In considering what steps it  
30 would be practical for SE2 to take toward the reduction of CO2 emissions, we  
31 determined that it would be possible to make a significant financial commitment, if it  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47

1 was clearly defined and spread over several years, to fund mitigation and/or offset  
2 programs aimed at solving the greenhouse gas problem. We therefore made a  
3 proposal to fund \$1.0 million over ten years toward this end. We are hopeful that this  
4 significant yet voluntary financial obligation we have assumed, along with all the many  
5 other costs SE2 will incur, environmental and otherwise, will not put SE2 at a  
6 competitive disadvantage to other merchant power plants in the region.  
7  
8  
9  
10  
11  
12  
13  
14

15 **Q. Dr. Gammon's testimony does not propose any specific mitigation strategy.**  
16 **Rather, referring to certain Oregon standards and the Kyoto Protocol, Dr.**  
17 **Gammon testifies that "these benchmarks should be used as guidance to achieve**  
18 **desired reduction in CO2 emissions." As the project developer, do you agree**  
19 **that these are appropriate benchmarks to apply to the SE2 project?**  
20  
21  
22  
23

24 **A.** No. While these "benchmarks" are helpful to understand the broader nature of the  
25 greenhouse gas issue, only specific policies applied even handedly to all projects are  
26 appropriate standards for achieving greenhouse gas reductions. Policy for greenhouse  
27 gas emissions reductions needs to be developed at a state level, if not at a national  
28 level. Such policies need to be specific, and need to apply equitably to all projects.  
29 Given the lack of state and national policy and regulations, we have generously made a  
30 significant voluntary financial commitment towards solutions to this problem.  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40

41 **Q. A number of witnesses, including Ms. Hirsh, Mr. West, and Dr. Smith, provide**  
42 **criticism and recommendations regarding the types of projects that should be**  
43 **included in SE2's Greenhouse Gas Mitigation Plan. As the developer of the SE2**  
44 **project, what is your response to these criticisms and recommendations?**  
45  
46  
47

1 A. They may be right. Energy conservation or green energy projects may be better than  
2 carbon sequestration projects or research projects, or a carbon sequestration project  
3 may be the most appropriate mitigation measure for this project (Ms. Hirsh and Dr.  
4 Smith appear to disagree on this issue) – we don't know. We never intended to  
5 promote one at the expense of another. Rather, in the absence of any federal, state or  
6 local regulation, SE2 has done something very unique in volunteering to commit \$1  
7 million to greenhouse gas mitigation projects. We are happy to work with EFSEC,  
8 CTED's Energy Division, NWECC or other appropriate parties to select the projects to  
9 which that funding will be directed. We simply wish to avoid creating a cumbersome  
10 bureaucratic structure that would detract from the mitigation effort.

21  
22 **Q. Ms. Hirsh also testified that there is no ecological basis for SE2's offer of \$1**  
23 **million for greenhouse gas mitigation. What is your response?**

24  
25 A. She is correct that there is no ecological basis for the \$1 million amount. Greenhouse  
26 gas mitigation is an evolving area. There are many different possible projects that  
27 offer varying levels of certainty and potential payoff. In other words, some  
28 opportunities may offer a fairly certain and definable level of carbon offset for a  
29 substantial fee, other opportunities may offer the potential for a much larger carbon  
30 offset, but may be more speculative. Understanding that Washington has no statute or  
31 regulations requiring any greenhouse gas mitigation, SE2 wanted to make a significant  
32 voluntary investment in greenhouse gas mitigation. We are hopeful that when all is  
33 said and done, and the prices of all of the different required and voluntary mitigation  
34 efforts are added together, we will be able to get financing for the project and be able  
35 to compete in the market place.  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47

1  
2  
3 **Q. A number of intervenor witnesses recommend that EFSEC apply the Oregon**  
4 **CO2 standard to the SE2 project. As the developer, do you agree with this**  
5 **recommendation?**  
6

7  
8  
9 A. No. It is not appropriate to apply the Oregon standard in Washington. The Oregon  
10 standard may make sense in the regulatory tapestry that exists in Oregon, but SE2 is  
11 being sited in Washington and the circumstances are much different. SE2 needs to be  
12 evaluated in reference to the rules and regulations in place in Washington--the same  
13 rules that will be applied to each and every proposed plant for Washington state. It is  
14 neither appropriate nor fair to subject the SE2 proposal to piecemeal, and somewhat  
15 arbitrary, standards that have not been applied to other projects and may not be  
16 applied to future projects.  
17  
18  
19  
20  
21  
22  
23  
24  
25

26  
27 **Q. Mr. West testifies that, under the Oregon CO2 standard, it could cost SE2 \$35**  
28 **million or more to mitigate CO2 emissions, that this would be an "extremely**  
29 **minor cost impact" to SE2, and that complete CO2 mitigation is "economically**  
30 **achievable and well within the range of competitiveness." From the standpoint**  
31 **of the project developer, is Mr. West's assessment accurate and reasonable?**  
32  
33  
34  
35

36  
37 A. No. First, a \$35 million CO2 offset requirement would increase the cost of the project  
38 by 8%-10% or more. This addition of a significant amount of upfront cost represents  
39 a barrier to obtaining financing for the project. That is, given similar projects, lenders  
40 and investors would opt to finance the project that was not subject to the large cost  
41 premium. Second, if the project were to be financed with such a large premium, it  
42 would require a significantly higher price for each and every MWH sold. Depending  
43  
44  
45  
46  
47

1 upon the actual operating rate of the plant, the incremental price requirement would be  
2 at least \$1 per MWH (which is equal to the one-tenth of one cent per kilowatt hour  
3 Mr. West calculated) more than projects not required to make this investment. In a  
4 highly competitive market that typically differentiates and trades on a few cents per  
5 MWH, SE2 would not be competitive. To provide an example, consider an entity that  
6 purchases 100 MW for a full year. At current market prices, the price might be \$30  
7 per MW or approximately \$26 million a year. If SE2 must sell at \$31 per MW, its  
8 yearly price for the same amount of electricity will be almost \$1 million more  
9 expensive. Whether a purchaser has a year-long contract for a large amount of power,  
10 or is buying a small amount on the open market, it seems clear that a purchaser will  
11 buy the cheaper electricity. I believe it is a virtual certainty that a premium such as this  
12 would destroy SE2's economic viability and make financing impossible.  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26

27 Furthermore, although I do not have a full and detailed understanding of the Oregon  
28 standard, I do have an understanding of the cost of doing business in Washington  
29 versus Oregon from a regulatory and state tax structure perspective. The two states  
30 are quite different, both in the cost of doing business and in the nature of the costs  
31 themselves. For instance, in Washington, our project may be subject to a sales tax  
32 burden of \$20 million or more. Such a tax on construction costs does not exist in  
33 Oregon. Without accounting for all such differences, it is not appropriate to take one  
34 Oregon requirement out of context and arbitrarily apply it to a project in Washington.  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47

1 **Q. Mr. Usibelli testifies that SE2's offer to voluntarily fund \$1 million of greenhouse**  
2 **gas mitigation projects is "very small" relative to "the capital investment in the**  
3 **facility." Do you agree?**  
4

5  
6 **A.** No. First of all, I do not view \$1 million as a small amount of money, nor does SE2. I  
7  
8 must say that it has been disappointing that SE2's offer to voluntarily contribute this  
9  
10 amount to greenhouse gas mitigation has been met with more criticism than accolade.  
11  
12 Mr. Usibelli and other intervenors appear to be under the mistaken impression that  
13  
14 SE2 has an endless amount of funds to invest in this project. As I have stated, SE2  
15  
16 must obtain private financing to go forward with the project and such financing is not  
17  
18 infinite. Second, SE2's voluntary offer to fund \$1 million worth of greenhouse gas  
19  
20 mitigation must be viewed in the context of the entire project, more specifically,  
21  
22 mitigation measures for the entire project. SE2 has committed significant funds to  
23  
24 develop and incorporate numerous required and voluntary mitigation measures into the  
25  
26 project. For instance, wetland preservation and enhancement is proposed for almost  
27  
28 20 acres; significant effort in design and additional construction costs have been  
29  
30 employed to minimize noise; a wet/dry cooling system was designed to reduce water  
31  
32 use; significant design and safety enhancements have been added to the natural gas  
33  
34 pipeline to ensure the highest level of safety practical; numerous above-standard fire  
35  
36 prevention and suppression features have been added to the diesel storage tank; new  
37  
38 technology has been added to reduce NOx emissions; SE2 will fund an air monitoring  
39  
40 station; and SE2 issued a letter of intent to commit \$750,000 (Canadian) to an air  
41  
42 emission offset project in Canada. This list is by no means exhaustive. Frankly, there  
43  
44 are so many ways and places that SE2 has done something more to accommodate  
45  
46 people's concerns or improve the project, it is difficult to compile them all. The point  
47

1 is that, taken together, I think SE2's mitigation efforts have been anything but small.  
2  
3 The total cost of SE2's mitigation projects is also anything but small. Again, like other  
4  
5 project costs, mitigation costs must be at a level the allows the facility to be  
6  
7 economically viable.  
8  
9

10 **Q. Ms. Hirsh testified that a more significant "full mitigation and offset program"**  
11 **can provide economic opportunities for an applicant as markets for low impact**  
12 **and mitigated generation sources expand." Do you have a response?**  
13  
14  
15

16 **A.** I hope she is right. There has been some movement in that direction. If that market  
17  
18 developed, we would certainly consider investigating development opportunities in the  
19  
20 green energy sector. In fact, affiliates of SE2 are currently looking into some potential  
21  
22 biomass and wind power projects. From the standpoint of a project developer,  
23  
24 however, each project has to be able to stand on its own. Utilities and power  
25  
26 purchasers can develop portfolios of different resources and balance them as they see  
27  
28 fit, but in order to get financing, each project is separate and its numbers have to work  
29  
30 on paper.  
31  
32  
33  
34

### 35 PLANT EFFICIENCY

36 **Q. Mr. West has testified that heat rates for the SE2 facility will be close to 7,221**  
37 **Btu/kWh during gas firing and up to a maximum of 7,490 Btu/kWh during**  
38 **diesel firing when the heat rates are adjusted to reflect increased high values**  
39 **from impurities and conversion chemistry. Are these heat rates realistic?**  
40  
41  
42  
43

44 **A.** Mr. West's information is not correct. Based on review by our engineers, Mr. West is  
45  
46 confusing high heating value and low heating value and may just plain have bad  
47



1 information. For most purposes, it is most relevant to talk about high heating value;  
2 this is the basis on which gas is purchased and it is representative of the actual physical  
3 volume of the gas. I find low heating value to be a theoretical concept that is only  
4 useful to engineers and scientists. Additionally, I understand that the amount of CO2  
5 emitted in the combustion process does not vary with low heating value versus high  
6 heating value as suggested by Mr. West. These are just two different ways to measure  
7 the same thing. The average heat rate at base load for SE2 is 7212 Btu/kWh (higher  
8 heating value). Jeremy Pratt discusses this issue further in his rebuttal testimony.  
9  
10  
11  
12  
13  
14  
15  
16  
17

18 **Q. Mr. West testifies that the proposed SE2 plant would be "notably less efficient**  
19 **and more polluting" than other power plants. Is this accurate?**  
20

21 **A.** No. Mr. West's conclusion that SE2 would be "notably less efficient and more  
22 polluting" is a gross mischaracterization. Rather, according to the information  
23 provided by Mr. West, SE2 would *at worst* be the second most efficient plant  
24 operating for commercial purposes in the U.S.  
25  
26  
27  
28  
29  
30  
31

32 In his testimony, Mr. West identifies only *one* fully operating plant that he claims is  
33 more efficient than SE2. This is the River Road plant in Vancouver, Washington. Mr.  
34 West testifies that the Oregon Office of Energy has judged the River Road plant to be  
35 "the most efficient plant operating for commercial purposes in the U.S." Other than  
36 that one plant, Mr. West's statement that SE2 is less efficient and more polluting than  
37 other plants is based on very loose speculation. Mr. West refers to only *one* other  
38 existing plant that he says "*could be* even more efficient than the River Road plant,"  
39 but the plant is not fully operational so its actual efficiency is unknown. His opinion is  
40  
41  
42  
43  
44  
45  
46  
47

1 otherwise supported only by his testimony that someone from the Oregon Office of  
2 Energy mentioned in conversation that two proposed plants (site certificate holders) in  
3 Oregon were "*talking about*" higher heating value efficiencies. Many project  
4 developers "talk" about higher heating value efficiencies. Not all of them invest in the  
5 technology to achieve those efficiencies as SE2 has done.  
6  
7  
8  
9  
10  
11  
12  
13  
14

#### 15 **SITE RESTORATION**

16 **Q. Mr. Warren's testimony recommends as a condition of site certification that SE2**  
17 **post a surety for the costs to close and restore the site after the useful life of the**  
18 **facility. Do you agree with this recommendation?**  
19  
20  
21

22 **A.** This is not a reasonable requirement. To my knowledge, surety requirements are not  
23 imposed on industrial facilities in general. In any event, while such a requirement  
24 might make sense in the case of a nuclear plant, a coal mine or a refinery, it does not  
25 make sense for a plant like SE2. A natural gas plant like SE2 is a very clean plant and  
26 is relatively small compared to many other industrial applications. The likely scenario  
27 for the SE2 site is that after 25 or 30 years, the plant would be re-powered with more  
28 modern generation technology or the equipment would be sold at auction and the  
29 infrastructure reused in another application. If the plant was not re-powered, the site  
30 would likely be turned over to another industrial use by SE2 or an affiliate or a third  
31 party. The expectation is that even at the end of the plants useful life, the equipment  
32 and site would have remaining value.  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47

**PROJECT INFORMATION**

**Q. Ms. Hoag is very critical of the application and approval process for the existing Sumas Energy Cogeneration Facility by an affiliated NESCO company. Would you like to comment on these allegations?**

A. Ms. Hoag is incorrect in her statements and innuendo regarding application and approval of the Sumas Energy Cogeneration Facility (SE1). We are proud of the existing Sumas facility, its operating record, and its corporate citizenship. A good indication of how SE1 is regarded by third parties in the community can be obtained from this recent quote from Mr. Jamie Randles, Director of the Northwest Air Pollution Authority, the project's air regulator, who recently said the following:

Sumas Energy 1 is considered by the Northwest Air Pollution Authority to be one of the cleanest fossil fuel fired energy plants in the region and operates under one of the most stringent air permits in the State of Washington. They have had a good environmental record since their inception.

The prefiled testimony of David Davidson (Exhibit \_\_ (DD-T)), City Administrator of the City of Sumas, also attests to SE1's positive relationship with its community.

That said, Ms. Hoag's allegations regarding SE1 are not relevant to the current proceedings, and therefore do not warrant further discussion.

**Q. Ms. Hoag also testifies that SE2 has been "less than forthcoming with the public" in the current process and has been "deliberately disseminating misleading information and engaging in scare tactics." What is your response to these claims?**

1 A. These claims are unfounded and self serving. SE2 has always endeavored to be open,  
2 honest and cooperative in disseminating information to the public. SE2 has offered  
3 and provided information about the project to anyone who has asked. Any  
4 inaccuracies that may have occurred in the course of disseminating the tremendous  
5 volume of information about the project have been inadvertent. In the past two years  
6 or so, we have made many presentations, sent numerous mailings and even run some  
7 informational advertising in the papers and on the radio in Whatcom County. The  
8 purpose of these communications has been to make certain that people are informed  
9 about the project and have the information they feel they need. We believe these  
10 communications by SE2 have been informative and that the information has been  
11 found to be accurate and useful by the recipients. As part of our presentations and  
12 other communications, we have recently begun collecting feedback from people about  
13 the project. We have received endorsements from several governmental entities,  
14 community groups and others. Contrary to Ms. Hoag's assertions, I believe that SE2  
15 is generally regarded as being very forthcoming with information, analyses and details.  
16 We have heard this from others and we experience it in the open and constructive  
17 working relationships we have with most of the individuals, organizations and  
18 governmental entities with which we deal.

19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39 **END OF REBUTTAL TESTIMONY**

40 I declare under penalty of perjury that the foregoing testimony is true and correct to  
41 the best of my knowledge.  
42  
43  
44  
45  
46  
47